

**From:** [Schofield, Susan](#)  
**To:** [Zeno, Denise](#)  
**Cc:** [Mishkin, Katherine](#); [Cutt, Diana](#)  
**Subject:** RE: Cabo Rojo - FLUTe ports in bedrock wells  
**Date:** Monday, September 23, 2013 8:52:51 AM

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Buenos días,

Monitoring well MW-9R has been drilled. It is currently an open hole from the bottom of the surface casing (approximately 97 feet bgs) and the bottom of the hole (about 185 feet). The proposed ports will be in the open hole part of the borehole.

The monitoring well locations were planned to be in locations to monitor contamination associated with potential source areas and the zone between the PSAs and the contaminated Ana María supply well. Unfortunately because of many issues drilling in the bedrock and maintaining an open hole, most of the planned bedrock wells were not installed.

As soon as EPA approved the ports, I will order the equipment from FLUTe and advise EPA of the construction/installation schedule and subsequent monitoring well sampling.

Susan

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**From:** Zeno, Denise [mailto:[Zeno.Denise@epa.gov](mailto:Zeno.Denise@epa.gov)]  
**Sent:** Monday, September 23, 2013 8:18 AM  
**To:** Schofield, Susan  
**Cc:** Mishkin, Katherine; Cutt, Diana  
**Subject:** RE: Cabo Rojo - FLUTe ports in bedrock wells  
FYI.

Please clarify if MW-9R is already a completed well.

thanks

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**From:** Cutt, Diana  
**Sent:** Friday, September 20, 2013 6:31 PM  
**To:** Zeno, Denise  
**Cc:** Metz, Chloe; Mishkin, Katherine  
**Subject:** RE: Cabo Rojo - FLUTe ports in bedrock wells  
Denise – Sorry for the delay.

A few questions/suggestions on the recommended zones for multiport well screening in MW-9R and the Pozo Escuela well:

- MW-9R is already a completed well on the figure provided – please clarify.
- The suggested zones seem fine based on the information provided (downhole wireline screening sampling and downhole geophysics). Since I'm not familiar with the site beyond the information provided I'd just like to add that the bigger picture (conceptual site model) should also be considered when selecting final zones - including the location of the well and its potential role in 2) determining flow direction/interconnectivity at different depths (are there patterns in fracture depths across the site?), and 2) monitoring contaminant movement over time (i.e. what are the concentrations in the overburden and other rock wells near these wells).

Any questions let me know – I'll be at a conference next Mon-Wed so if you need to reach me it's best to call my cell 845-596-6631. Thanks.

-Diana

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**From:** Metz, Chloe  
**Sent:** Tuesday, September 17, 2013 2:17 PM  
**To:** Cutt, Diana  
**Cc:** Zeno, Denise  
**Subject:** RE: Cabo Rojo - FLUTe ports in bedrock wells

Thanks, Diana!

Denise, Diana thought she could get you something tomorrow.

Chloe Metz  
Chief, Technical Support Section  
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**From:** Cutt, Diana  
**Sent:** Tuesday, September 17, 2013 11:21 AM  
**To:** Metz, Chloe  
**Subject:** RE: Cabo Rojo - FLUTe ports in bedrock wells  
I can give it a quick look

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**From:** Metz, Chloe  
**Sent:** Tuesday, September 17, 2013 11:05 AM  
**To:** Alvey, Robert; Cutt, Diana; Flynn, Kathryn; Modica, Edward; Scorca, Michael; Singh, Sharissa  
**Cc:** Zeno, Denise  
**Subject:** FW: Cabo Rojo - FLUTe ports in bedrock wells

All,

Sorry for the mass email, but does anyone have time for a quick review of the Cabo Rojo geophysical results? The contractor needs to make some quick decisions about where to locate the FLUTe ports. This is one of Katie's sites that we didn't reassign. Thanks!

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**From:** Zeno, Denise  
**Sent:** Tuesday, September 17, 2013 10:50 AM  
**To:** Metz, Chloe  
**Subject:** RE: Cabo Rojo - FLUTe ports in bedrock wells

Hi, Chloe,

The pdf files contains minimal information (probably 15 to 30 min to review data and provide feedback). I need a quick review of the data and feedback from hydro.

The contractor is awaiting for our approval to buy and install the FLUTe system. Based of the geophysical results (fracture zones and flow zones) and the wireline sample results in

these files, **does the hydro agrees with the contractor's recommendation for port intervals?**

Contractor's statement is as follows:

"a spreadsheet that suggests port intervals for 2 wells – MW-9R and also Pozo Escuela, which we would like to convert into a multiport monitoring well. The geophysical logging results are attached for MW-9R, Pozo Escuela and Ana Maria. The suggested port intervals are based on the geophysical results (fracture zones and flow zones) and the wireline sample results. "

thanks

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**From:** Metz, Chloe

**Sent:** Monday, September 16, 2013 4:04 PM

**To:** Zeno, Denise

**Subject:** RE: Cabo Rojo - FLUTe ports in bedrock wells

Denise, when do you need comments? Unfortunately, Katie didn't reassign Cabo since she wasn't anticipating having anything in for review. So, it will just take a little time for me to figure out who has time right now. Thanks!

Chloe Metz

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**From:** Zeno, Denise

**Sent:** Monday, September 16, 2013 3:00 PM

**To:** Metz, Chloe

**Subject:** FW: Cabo Rojo - FLUTe ports in bedrock wells

Hi Chloe!

Attached are the geophysical testing and wireline sampling for some wells in Cabo Rojo. I forgot that Katherine is still in maternity leave. Could you please let me know who in your group can review these documents and provide feedback?

Thanks

Denise

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**From:** Zeno, Denise

**Sent:** Monday, September 16, 2013 2:43 PM

**To:** Mishkin, Katherine; Hauptman, Mel

**Subject:** FW: Cabo Rojo - FLUTe ports in bedrock wells

For your review and feedback!

thanks

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**From:** Schofield, Susan [<mailto:SchofieldSE@cdmsmith.com>]

**Sent:** Monday, September 16, 2013 1:25 PM

**To:** Zeno, Denise

**Cc:** Delano, Frances

**Subject:** Cabo Rojo - FLUTe ports in bedrock wells

Buenas tardes Denise,

I will attach several files with results from the geophysical testing and wireline sampling at some of the wells at Cabo Rojo, including a spreadsheet that suggests port intervals for 2 wells – MW-9R and also Pozo Escuela, which we would like to convert into a multiport monitoring well. The geophysical logging results are attached for MW-9R, Pozo Escuela and Ana Maria. The suggested port intervals are based on the geophysical results (fracture zones and flow zones) and the wireline sample results.

As soon as EPA approves the port intervals, we will place the order with FLUTe and install the equipment in the wells as soon as the components are built and shipped to Puerto Rico. I am available all week if you want to discuss any of the attached data.

Best,

Susan

**Susan E. Schofield, P.G.**

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